

SYNTHESIZER

**KORG POLYPHONIC
ENSEMBLE**

1000

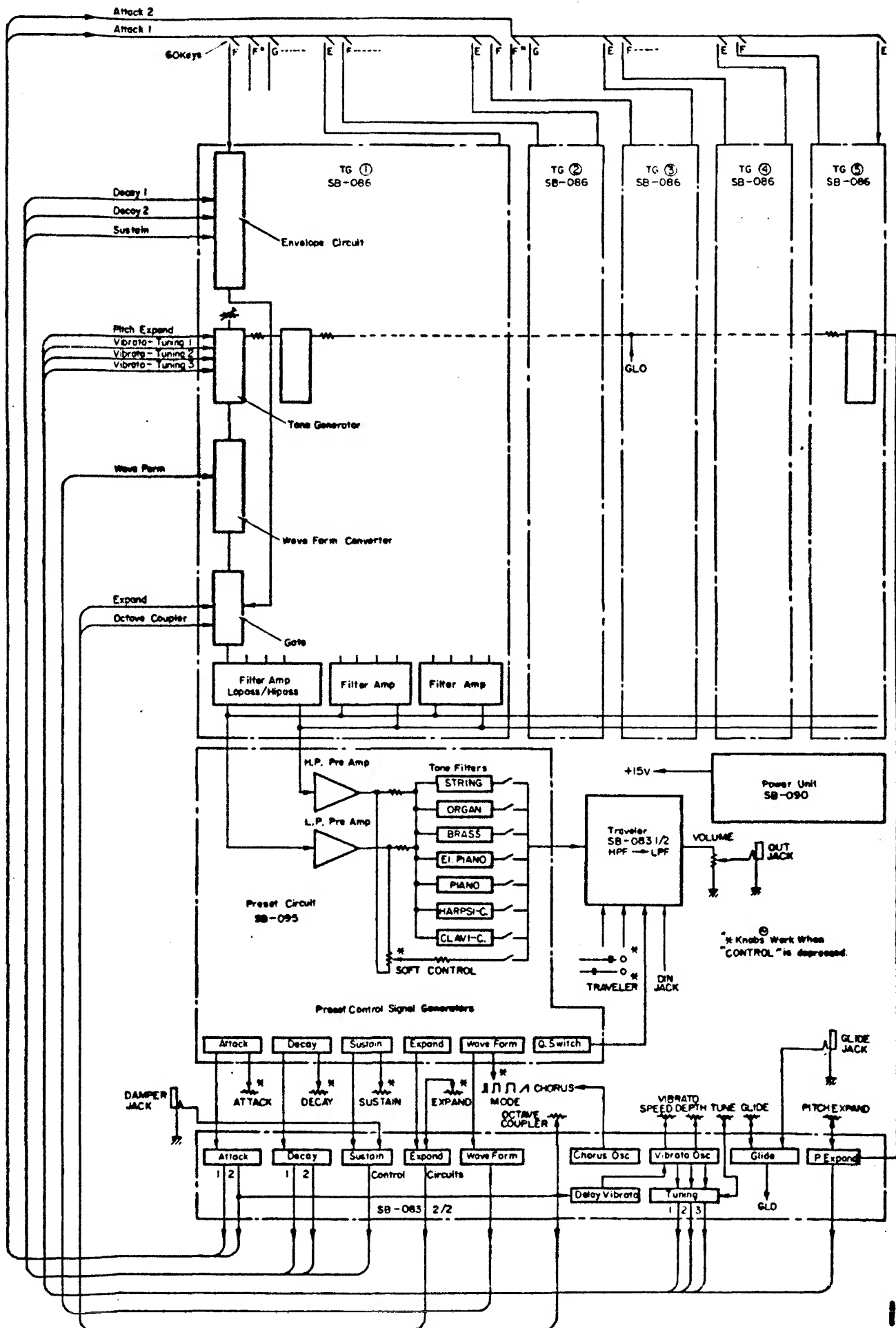
SERVICE MANUAL

0/21

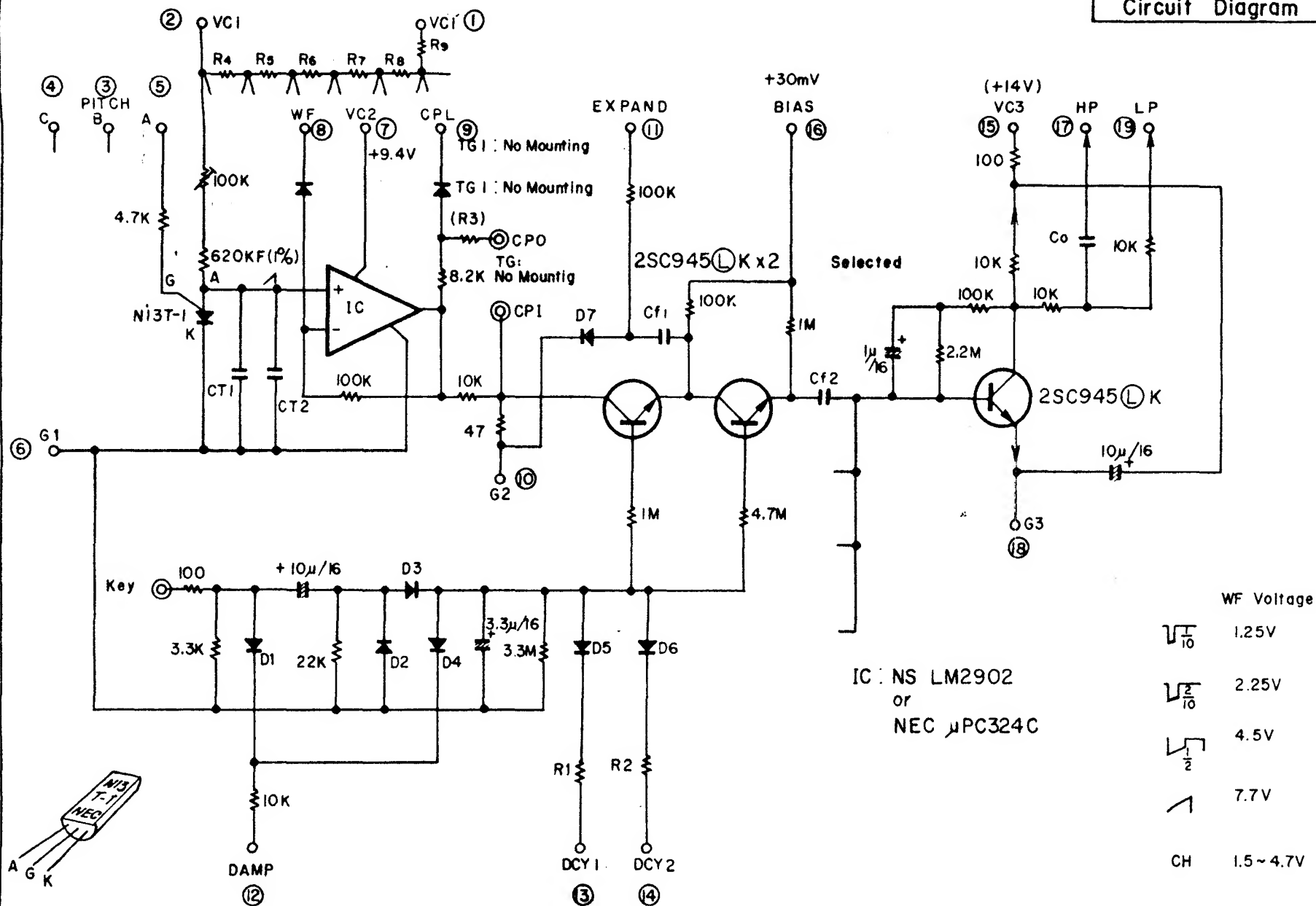
KEIO ELECTRONIC LAB., CORP.
TOKYO, JAPAN

Printed in Japan

BLOCK DIAGRAM



Tone Generator Circuit Diagram



	NO. 1		NO. 2		NO. 3		NO. 4		NO. 5	
F		27.000 20.000		22.000 1.500		11.000 680		5.600 220		2.700 150
F#		24.000 20.000		22.000		11.000		5.100 330		2.700
G		27.000 15.000		20.000 1.000		10.000 470		5.100 100		2.400 150
G#		27.000 12.000		20.000		9.100 680		4.700 220		2.400
A		27.000 10.000		18.000 680		9.100 150		4.300 330		2.200 100
A#		27.000 8.200		16.000 1.500		8.200 560		4.300		2.000 150
B		27.000 6.200		16.000 680		8.200 100		3.900 220		2.000
C		27.000 4.300		15.000 680		7.500 330		3.900		1.800 100
C#		27.000 2.700		13.000 1.800		6.800 560		3.600		1.800
D		27.000 1.000		13.000 1.000		6.800 150		3.300 150		1.600 100
D#		24.000 2.200		13.000 150		6.200 330		3.000 220		1.600
E		24.000 1.000		12.000 470		6.200		3.000 47		1500P

Tone Generator CR Chart

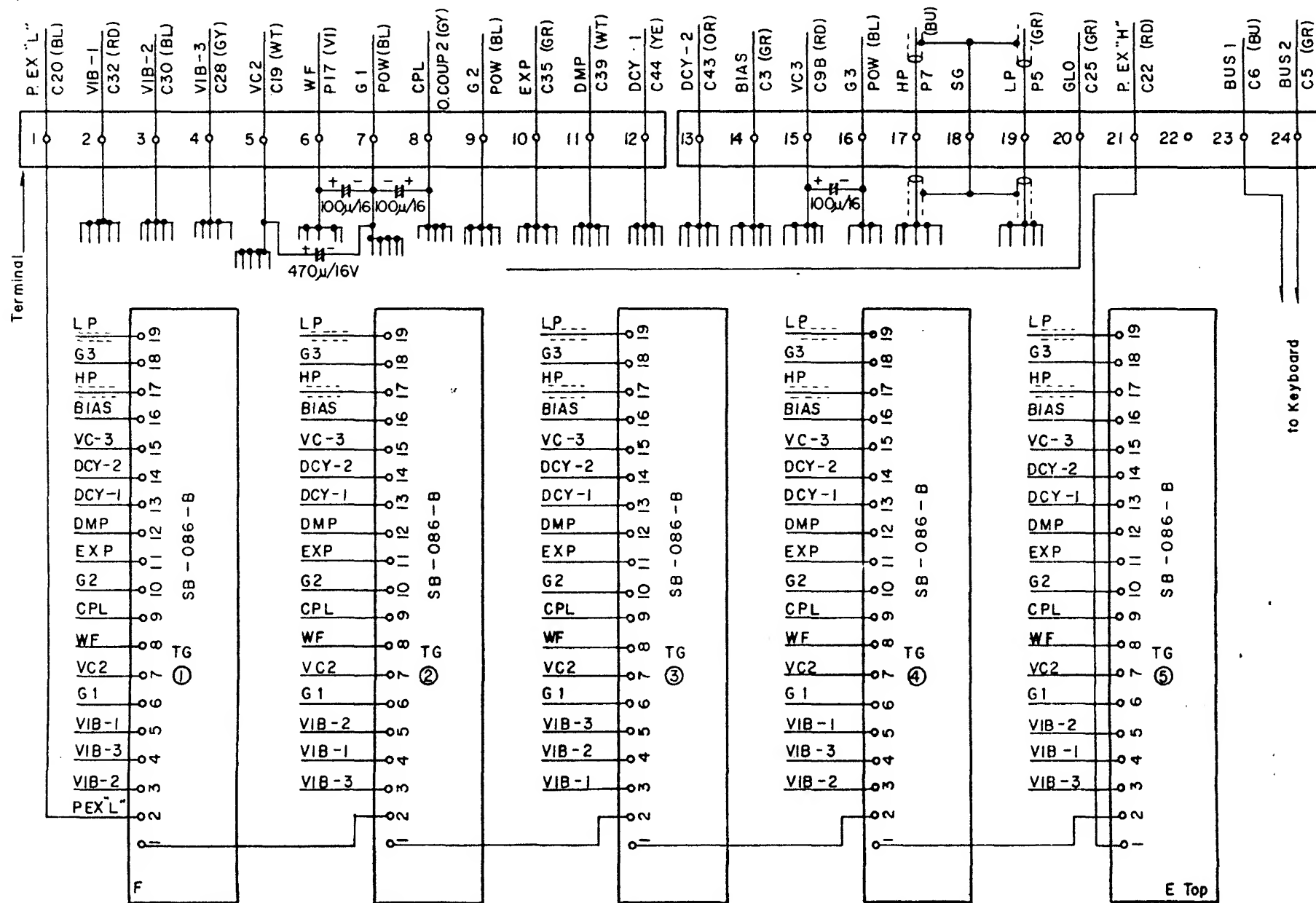
	R 1	R 2	R 3	R 4 R 5 R 4 R 7 R 8 R 9		Cf 1	Cf 2	Co		
Low	NO 1	6.8K	220K		20		0.047	0.056	0.18	
					20					
		6.8K	220K		20		0.047	0.047	0.15	
					20					
		6.8K	220K		20		0.047	0.039	0.12	
					20					
	NO 2	5.6K	180K	8.2K	10		0.047	0.033	0.1	
					10					
		5.6K	180K	8.2K	10		0.047	0.027	0.082	
					10					
		5.6K	180K	8.2K	10		0.047	0.022	0.068	
					10					
	NO 3	4.7K	150K	8.2K	J		0.047	0.018	0.056	
					J					
		4.7K	150K	8.2K	J		0.047	0.015	0.047	
J										
4.7K		150K	8.2K	J	0.047		0.012	0.039		
				J						
NO 4	3.9K	120K	8.2K	10		0.047	0.01	0.033		
				10						
	3.9K		8.2K	10		0.047	0.01	0.027		
				10						
	3.9K	100K	12K	10		0.047	0.01	0.022		
				10						
NO 5	3.3K	68K	18K	20		0.047	0.01	0.018		
				20						
	3.3K		47K	20		0.047	0.01	0.015		
				20						
	3.3K	47K	82K	20		0.047	0.01	0.012		
				20						

High

J. Jumper

4/21

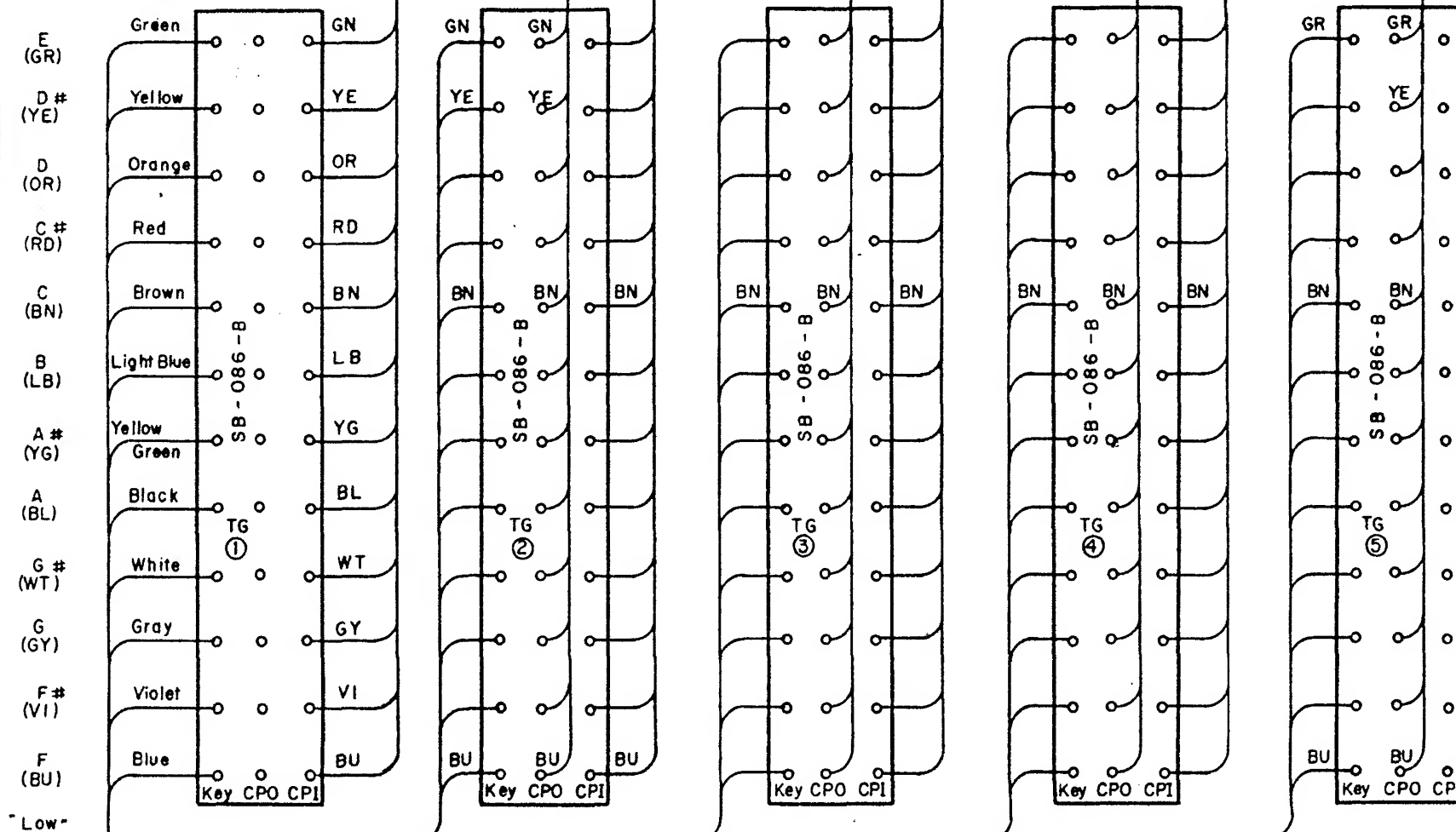
Tone Generator Wiring (1)



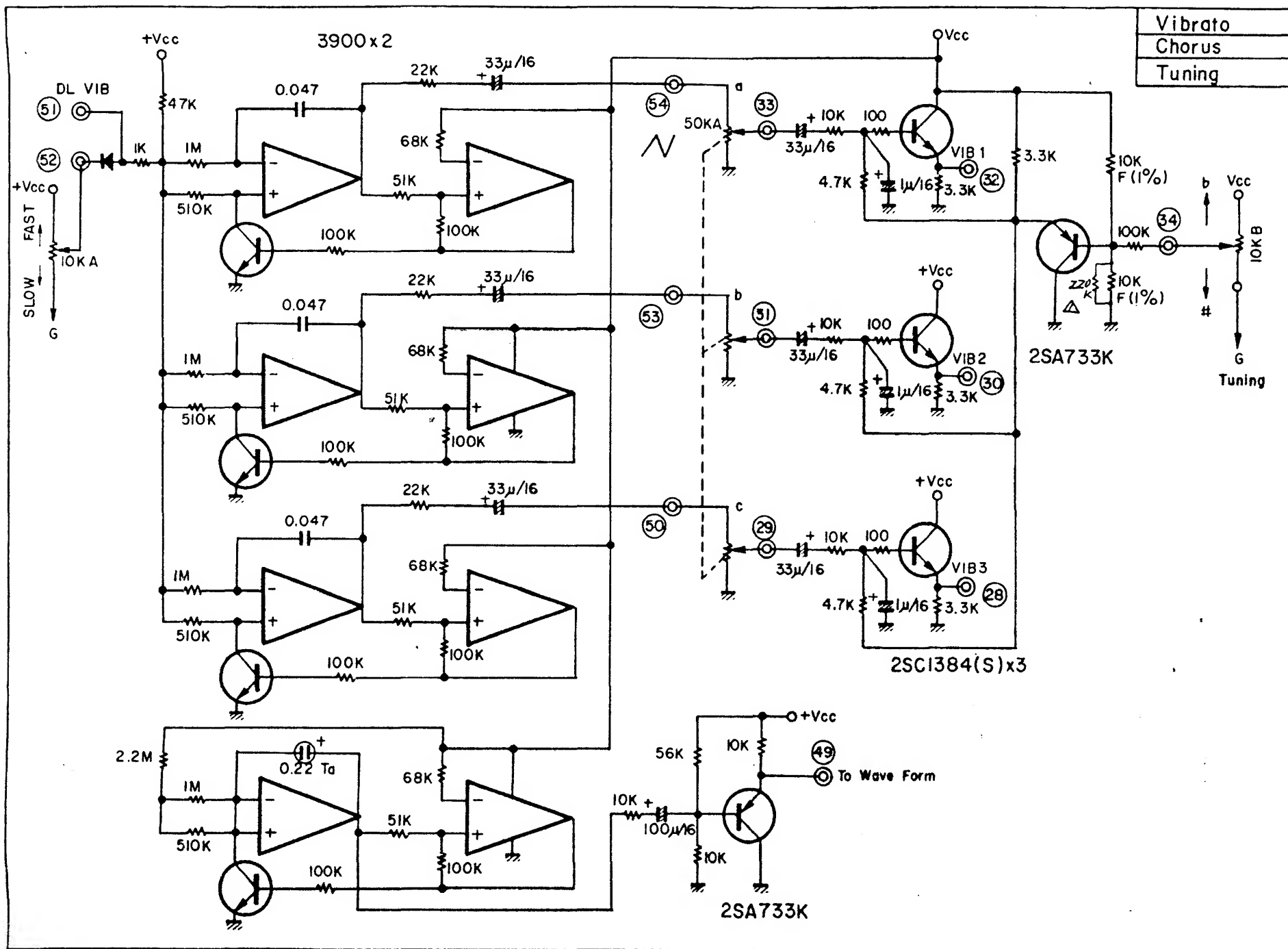
Tone Generator Wiring (2)

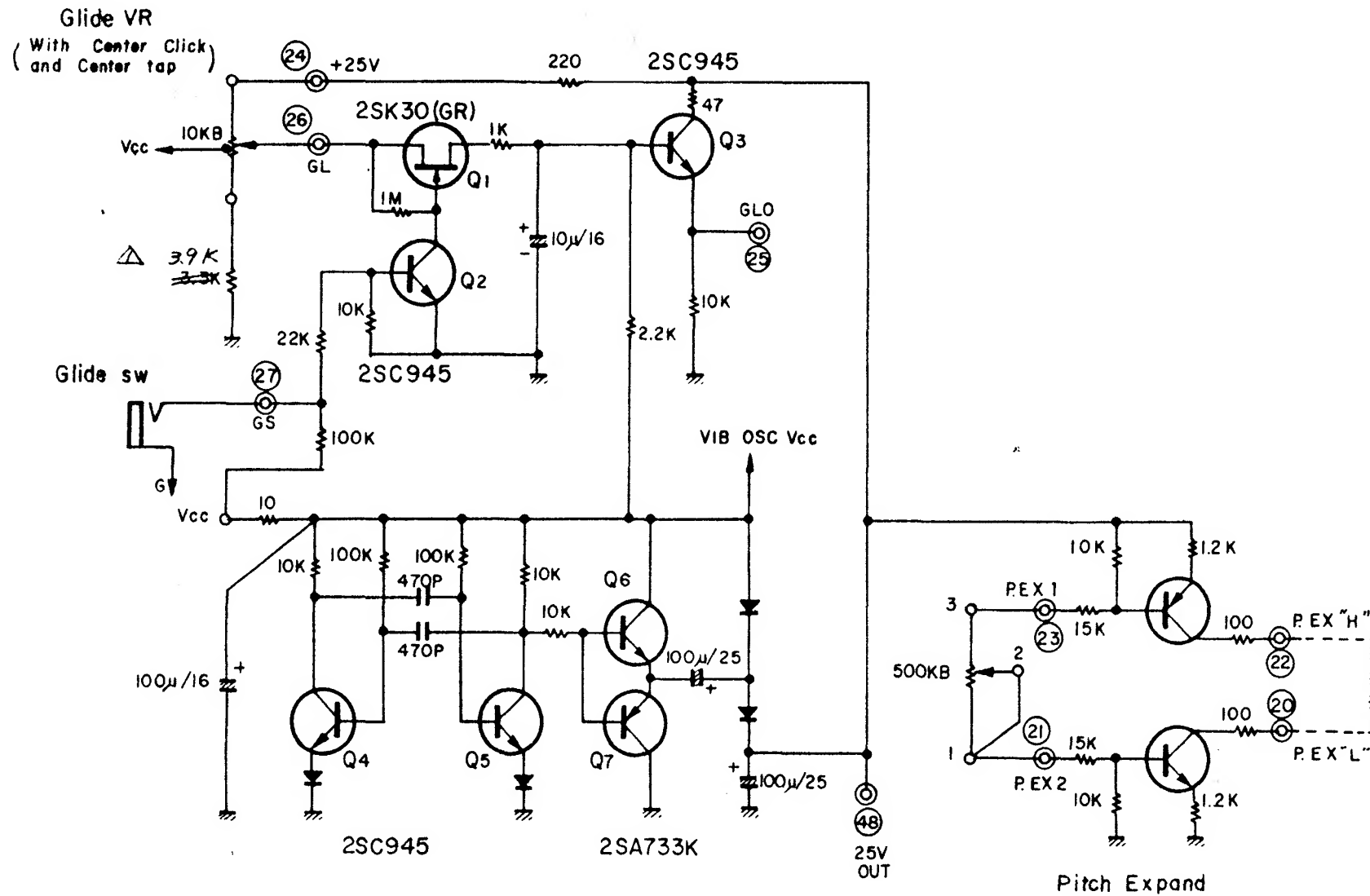
Coupler Wiring

"High"
E Top

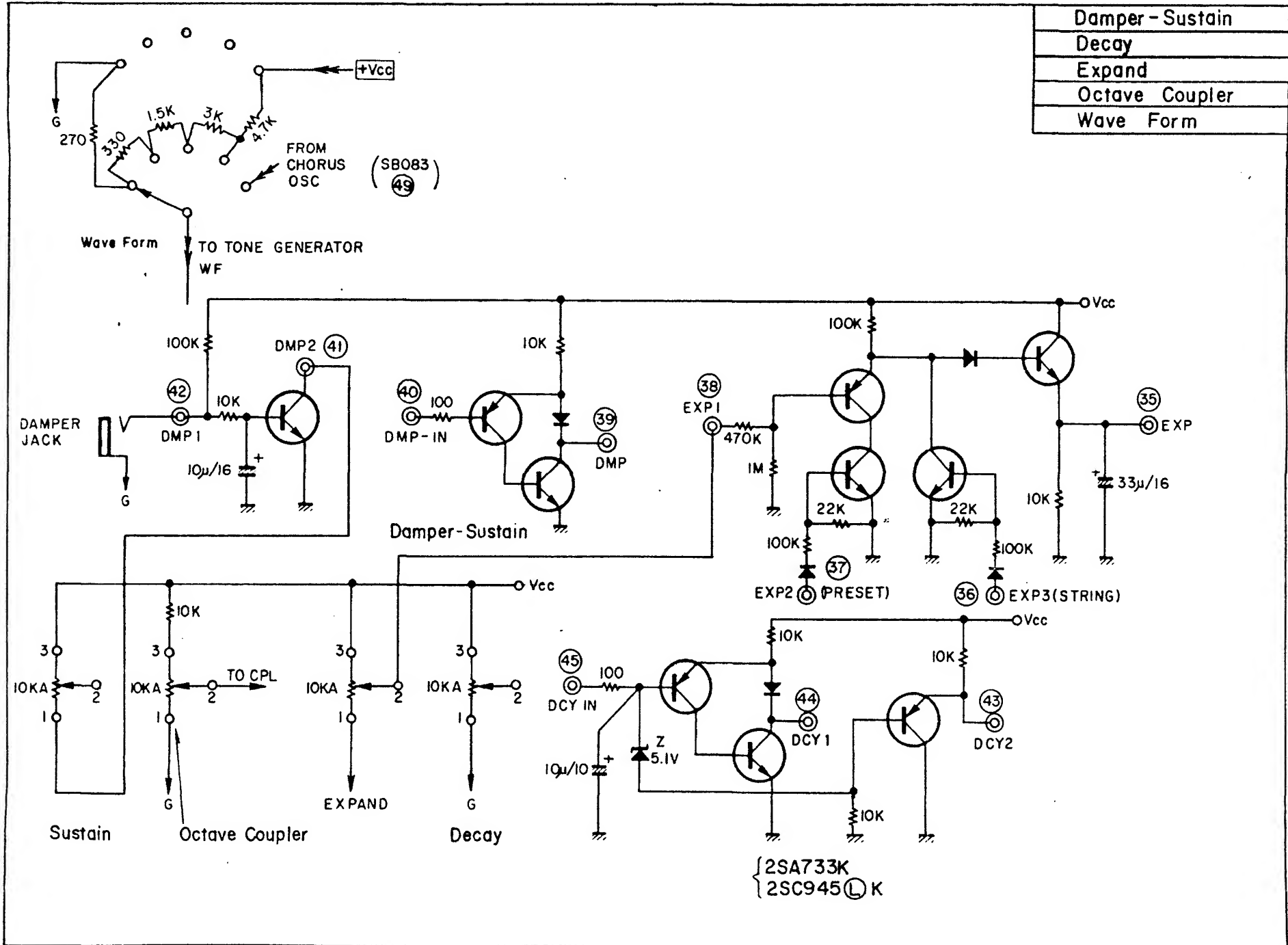


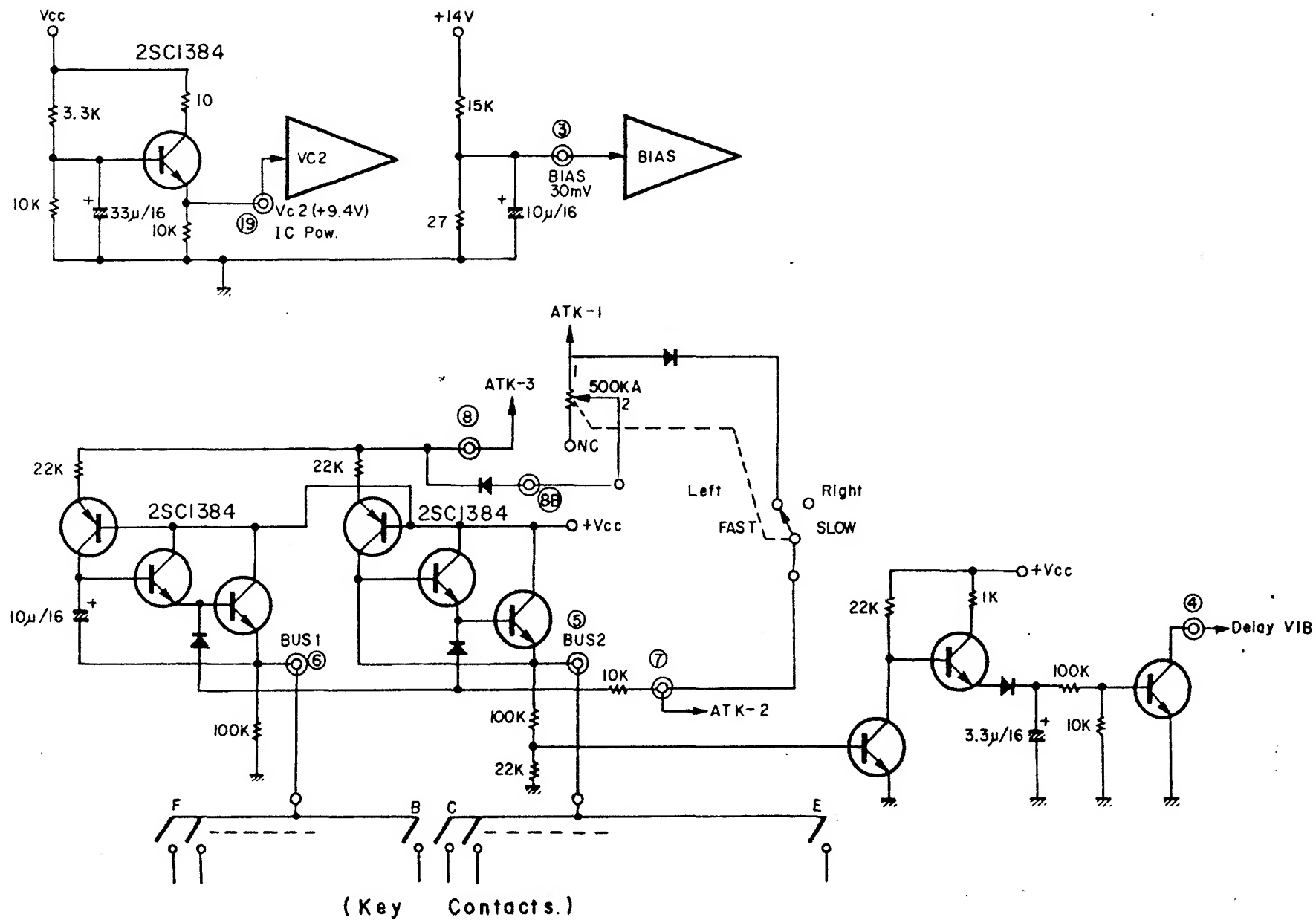
to Keyboard





Damper - Sustain
Decay
Expand
Octave Coupler
Wave Form





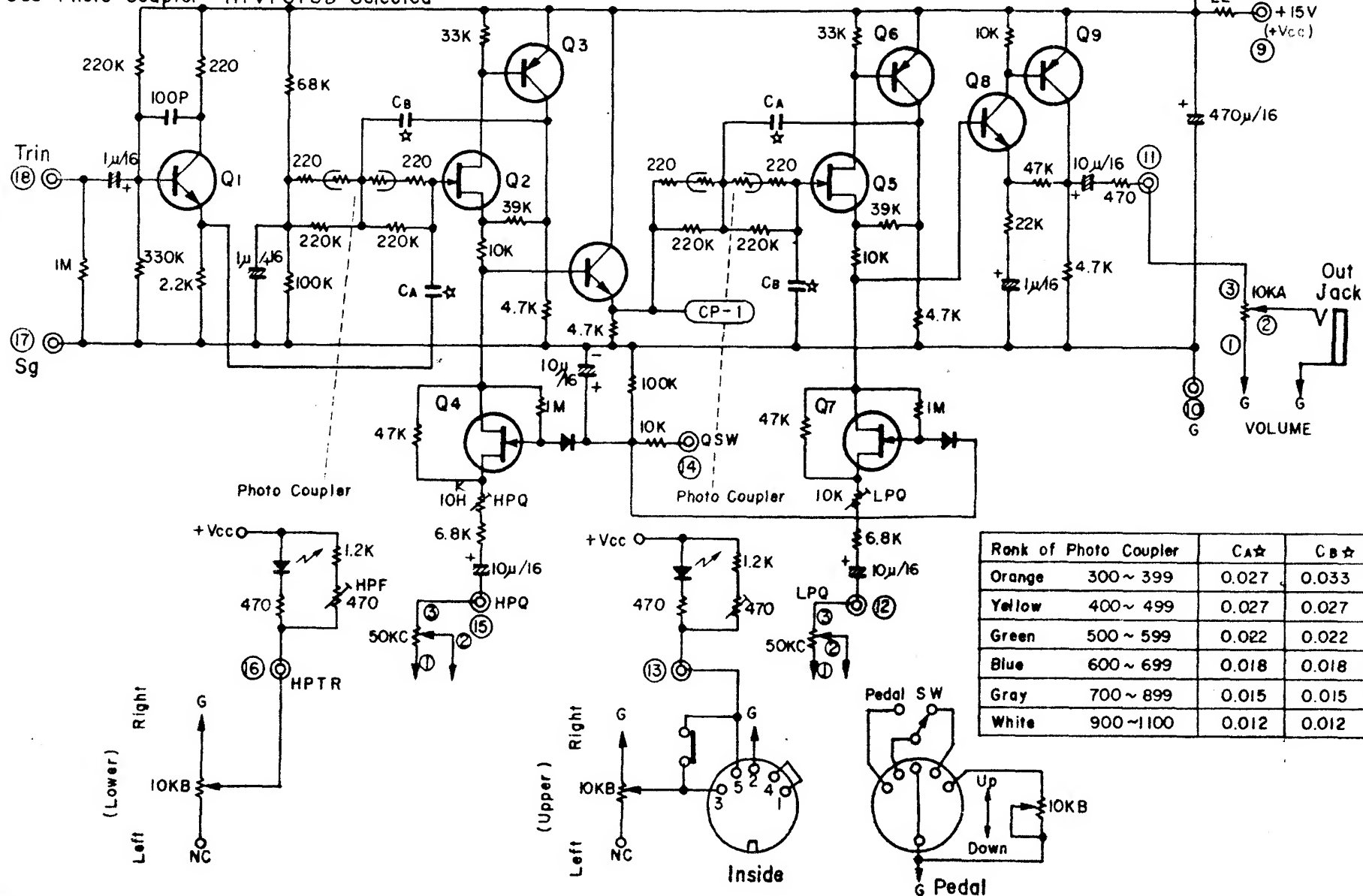
Traveler

2SC ---- 2SC945 ① K

2SA ---- 2SA733K

FET ---- 2SK30 (O)

Cds Photo Coupler HTVP873D Selected



P : Preset
SB-095-D

C : Control
SB-083-E

T : Terminal

POW: Power Supply

2 means No2 terminal of V.R.

Signal Name

Color

Connection

POW (BL) G 1

POW (RD) Vcc 2

T14 (GR) BIAS 3

C51 (YE) DL VIB 4

T24 (GR) BUS 2 5

T23 (BU) BUS 1 6

P12 (VI) ATK 2 7

P3 (GY) ATK 3 8

ATTACK 2 (YE) 8B

POW (RD) Vcc 9

P4 (RD) +14V 9B

POW (BL) G 10

VOLUME 3 (YE) TR OUT 11

PEAK H 3 (RD) LPQ 12

DIN J 5 (OR) LP TR 13

P22 (YE) QSW 14

PEAK L 3 (GR) H PQ 15

TR Lower 2 (BU) HP TR 16

P18 (YE) 17

TR IN 18

Vcc (RD) POW 46

G (BL) POW 47

+25V (GY) P25 48

CHORUS (WT) MODE 49

P2

V. DEPTH c (BL) VD. c 3 50

DL VIB (YE) C. 4 51

VIB SPEED (RD) VIB. S. 2 52

V. DEPTH b (GR) VD. b 3 53

V. DEPTH a (YE) VD. a 3 54

Control Wiring

VC2 (WT) T5 19

P. EX. L (BL) T1 20

P. EX. 2 (BN) P. EX. 2 21

P. EX. H (RD) T21 22

P. EX. 1 (OR) P. EX. 3 23

+24V (YE) GLIDE 3 24

GLO (GR) T20 25

GL (BU) GLIDE 2 26

GS (VI) GLIDE J 27

VIB 3 (GY) T4 28

V. DEPTH (WT) V. DC 2 29

VIB 2 (BL) T3 30

V. DEPTH b (BN) V. D. 6 2 31

VIB 1 (RD) T2 32

V. DEPTH a (OR) V. D. a 2 33

TUNING (YE) TUNE 2 34

EXP (GR) T10 35

EXP 3 (BU) P1 36

EXP 2 (YE) P22 37

EXP 1 (GY) EXPAND 2 38

DMP (WT) T11 39

DMP IN (BL) P24 40

DMP 2 (BN) SUSTAIN 1 41

DMP 1 (RD) DAMPER J 42

DCY 2 (OR) T13 43

DCY 1 (YE) T12 44

DCY IN (GR) P16 45

SB-083-E

Control

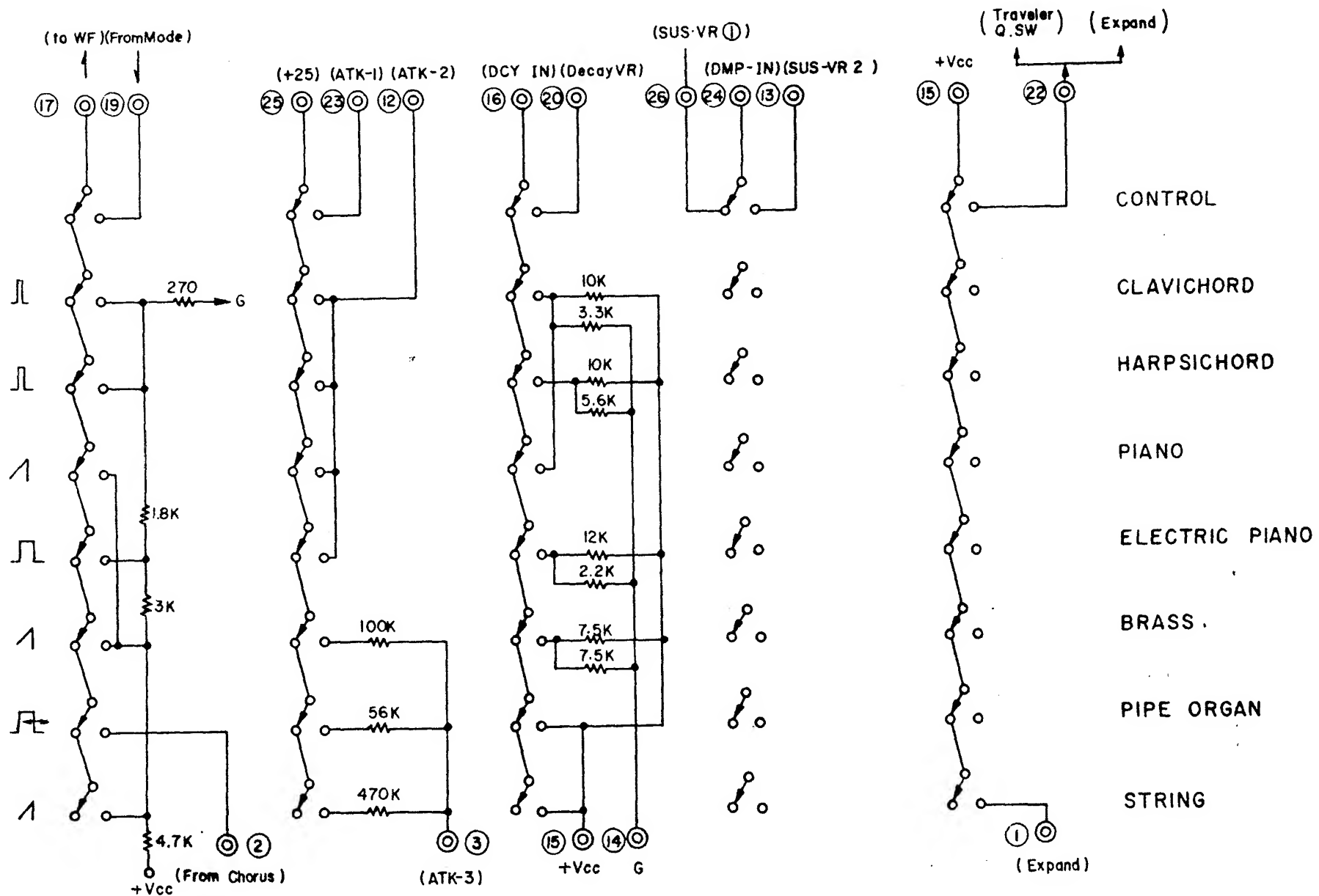
Wave Form

Attack

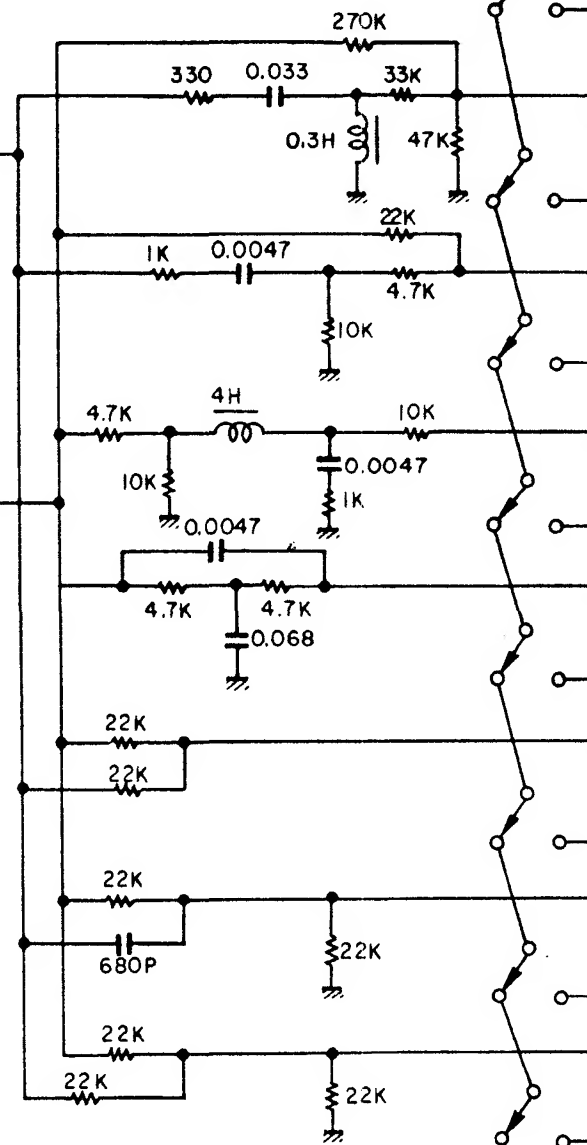
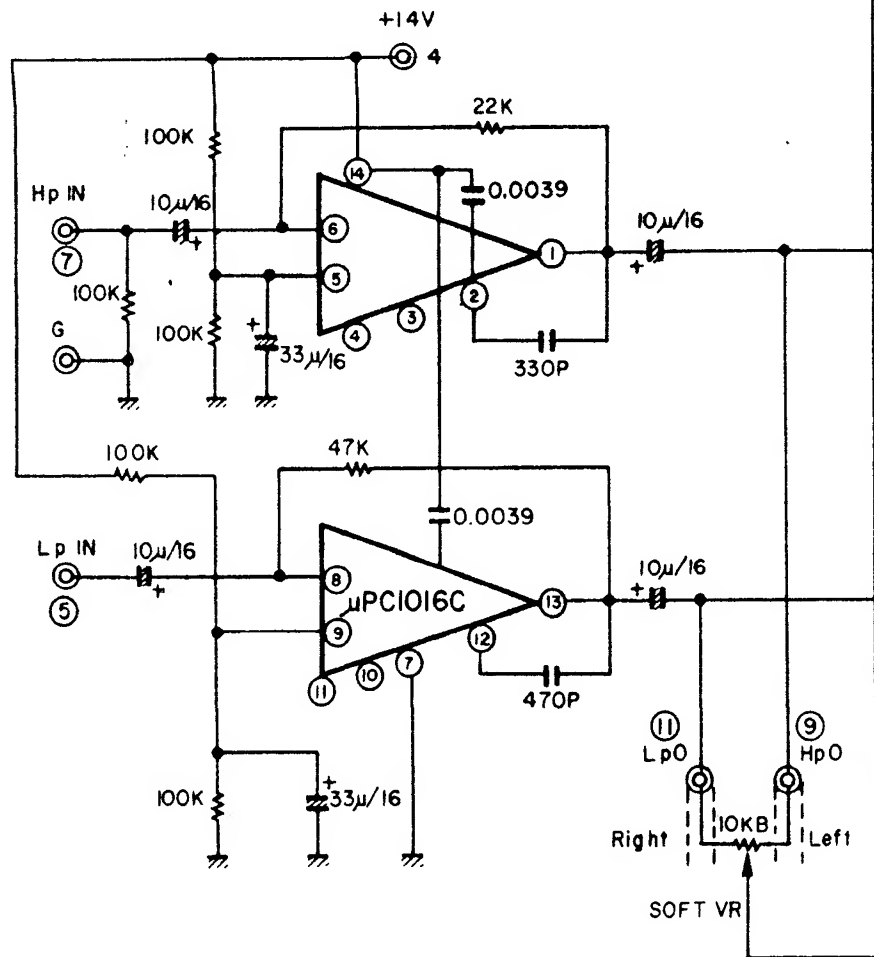
Decay

Damper - Sustain

Control Signal



Preset Tone
Pre Amps.



Control

Clavichord

Harpsichord

Piano

Electric Piano

Brass

Organ

String

Preset Wiring

Notice

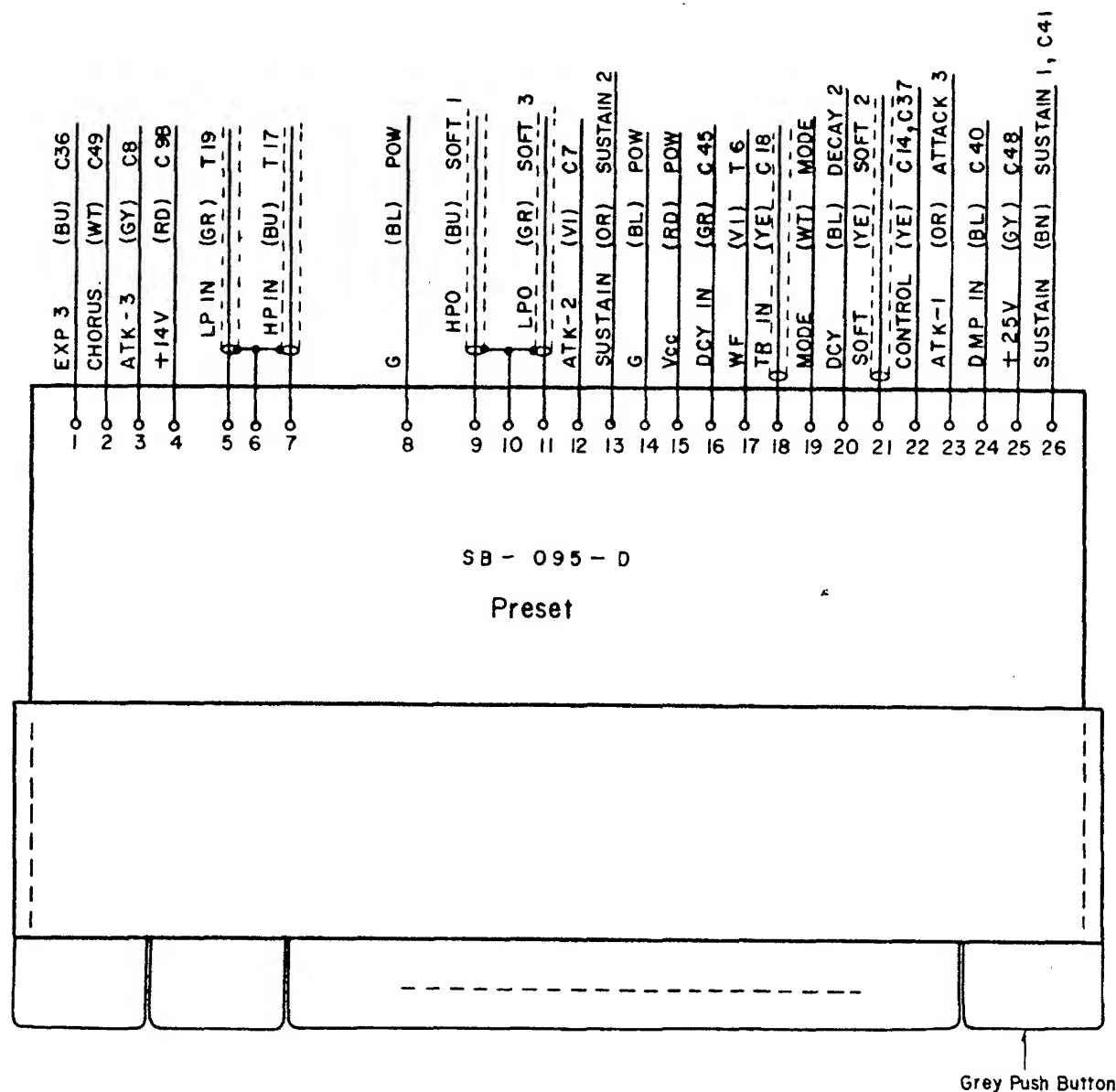
P : Preset
SB-095-D

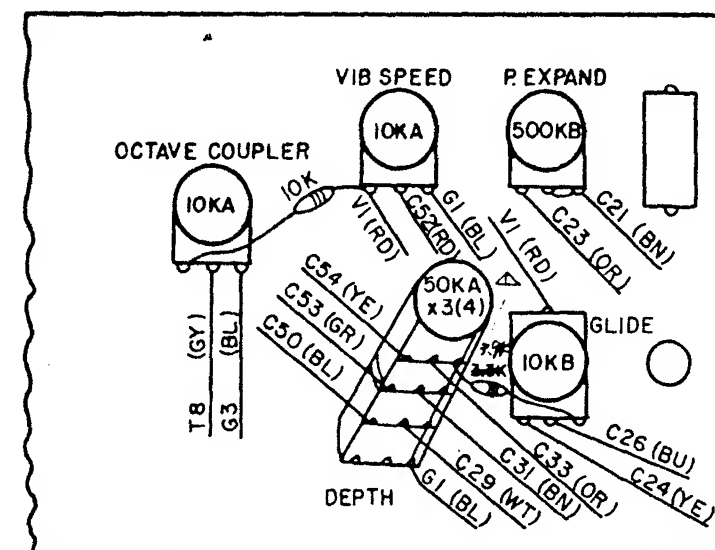
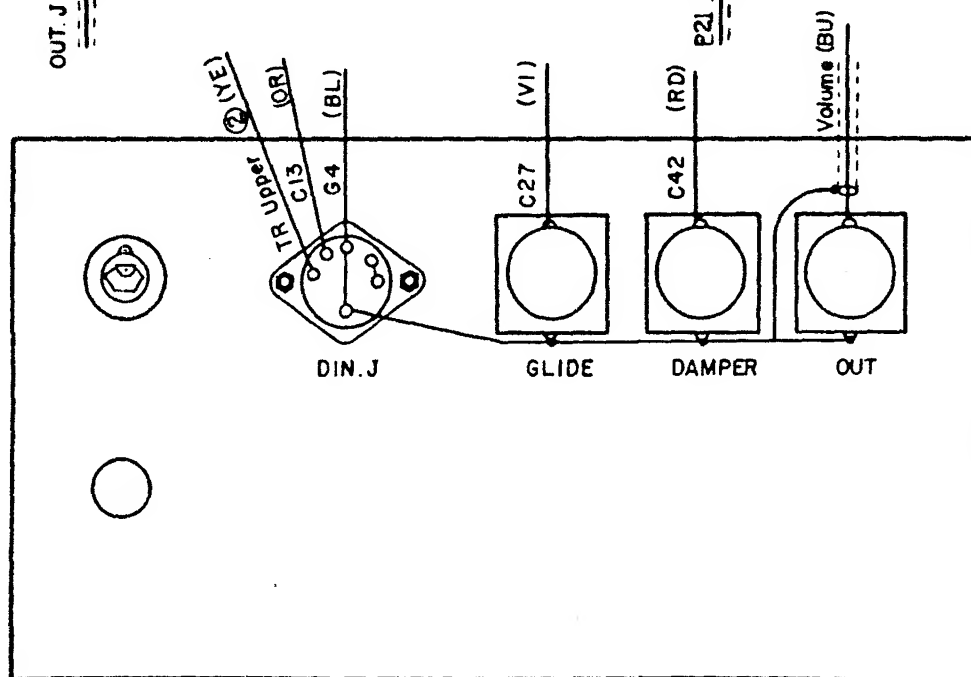
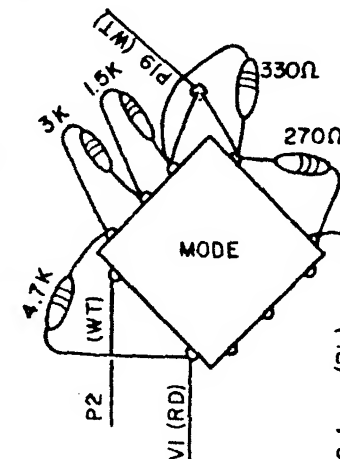
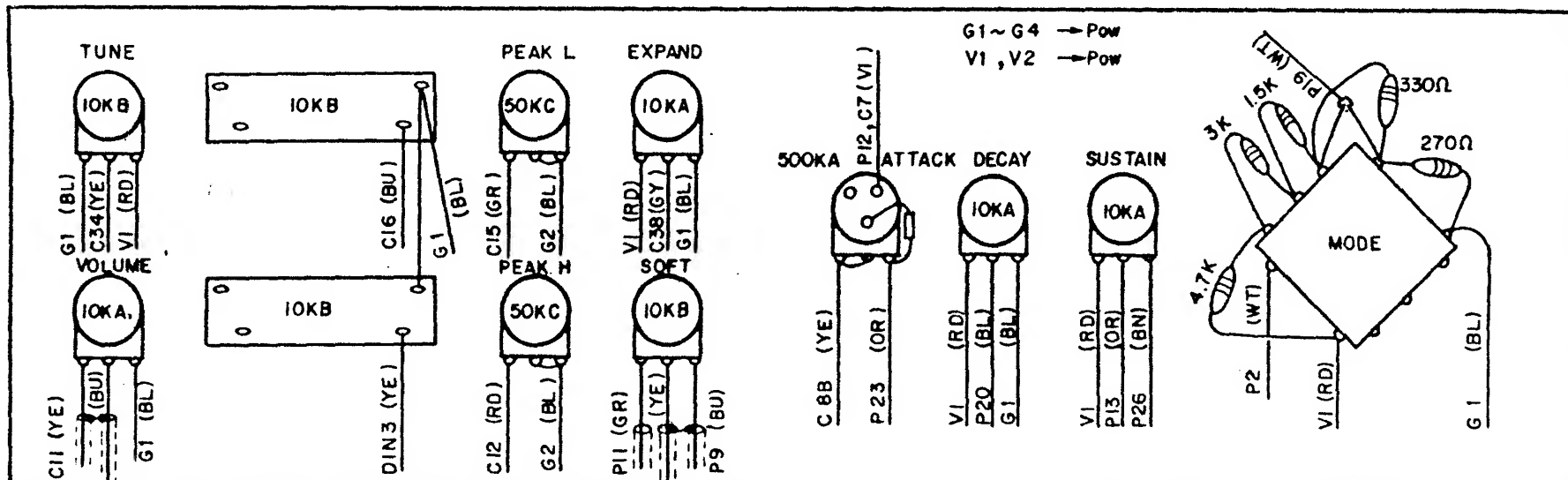
C : Control
SB-083-E

T : Terminal

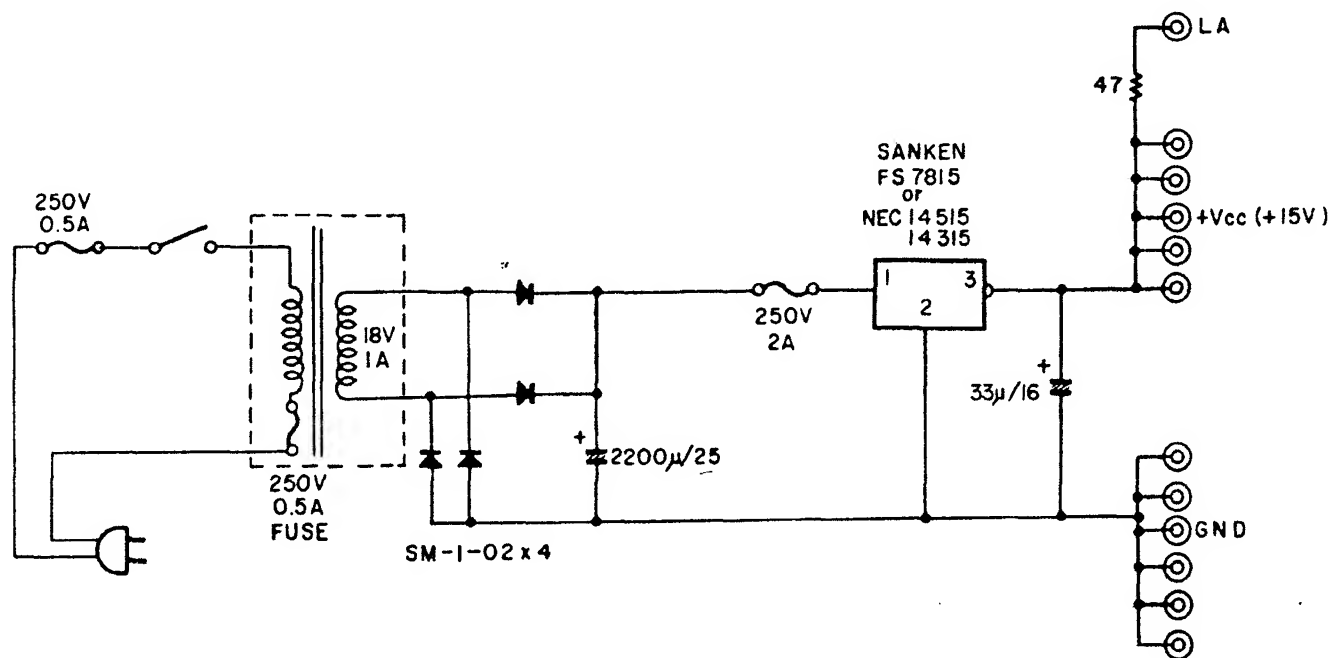
POW: Power Unit

BN : Brown
RD : Red
OR : Orange
YE : Yellow
GR : Green
BU : Blue
VI : Violet
GY : Gray
WT : White
BL : Black
YG : Yellow Green
LB : Light Blue





Power Supply

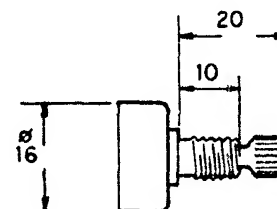


1	VOLUME	16 ϕ	10KA	VM10A	10KA
2	TUNE	16 ϕ	10KB	VM10A	10KB
3	PEAK H	16 ϕ	50KC	VM10A	50KC
4	PEAK L	16 ϕ	50KC	VM10A	50KC
5	SOFT	16 ϕ	10KB	VM10A	10KB
6	EXPAND	16 ϕ	10KA	VM10A	10KA
7	ATTACK	16 ϕ with Switch	500KA	VM11A	5M1222 - 500KA
8	DECAY	16 ϕ	10KA	VM10A	10KA
9	DAMPER	16 ϕ	10KA	VM10A	10KA
10	COUPLER	16 ϕ	10KA	VM10A	10KA
11	VIBRATO DEP.	16 ϕ 3-Ganged	50KA	HM10A	50KA x 3
12	VIB SPEED	16 ϕ	10KA	VM10A	10KA
13	GLIDE	16 ϕ with Center Click and Center Tap	10KB	VM10E	10KB
14	PITCH EXPAND	16 ϕ	500KB	VM10A	500KB
15	TRAVELER(Upper)	60mm	10KB	EVA - SOAB00B14	
16	TRAVELER(Lower)	60mm	10KB	EVA - SOAB00B14	
17	MODE	2-4-5 Rotary Switch		ESR - N245K20	
18	PRESET SWITCH	8 Push Buttons		MBS - 086 - e	
19	POWER SWITCH			MIYAMA 63	
20	PILOT LAMP	RED		BQ054 - 32715A	

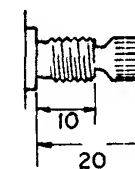
Variable Resistor

Variable Resistor
(Sliding Type)

Rotary Switch



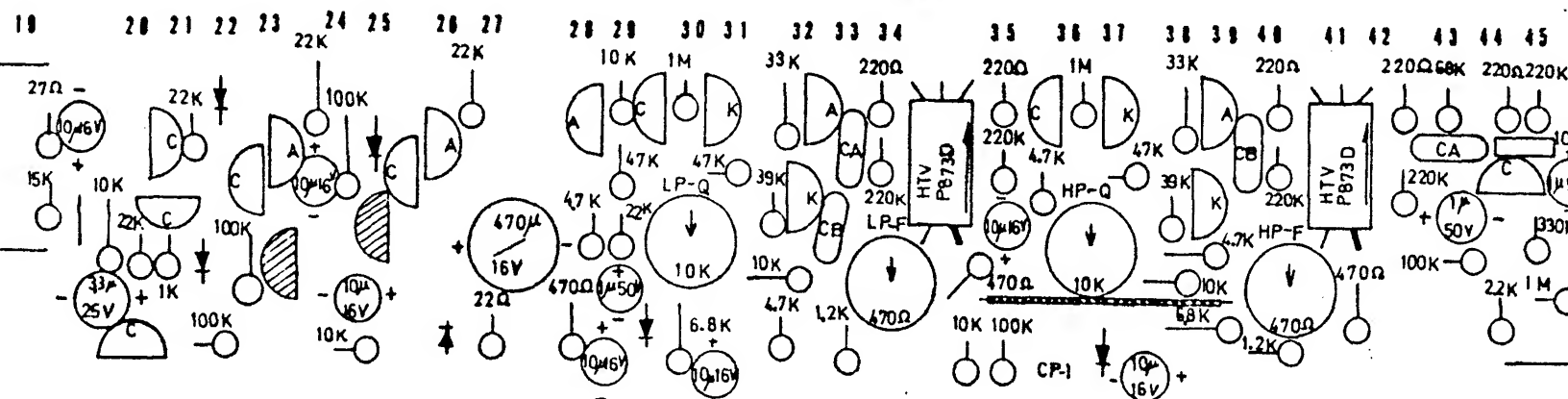
18 Serrations



18 Serrations

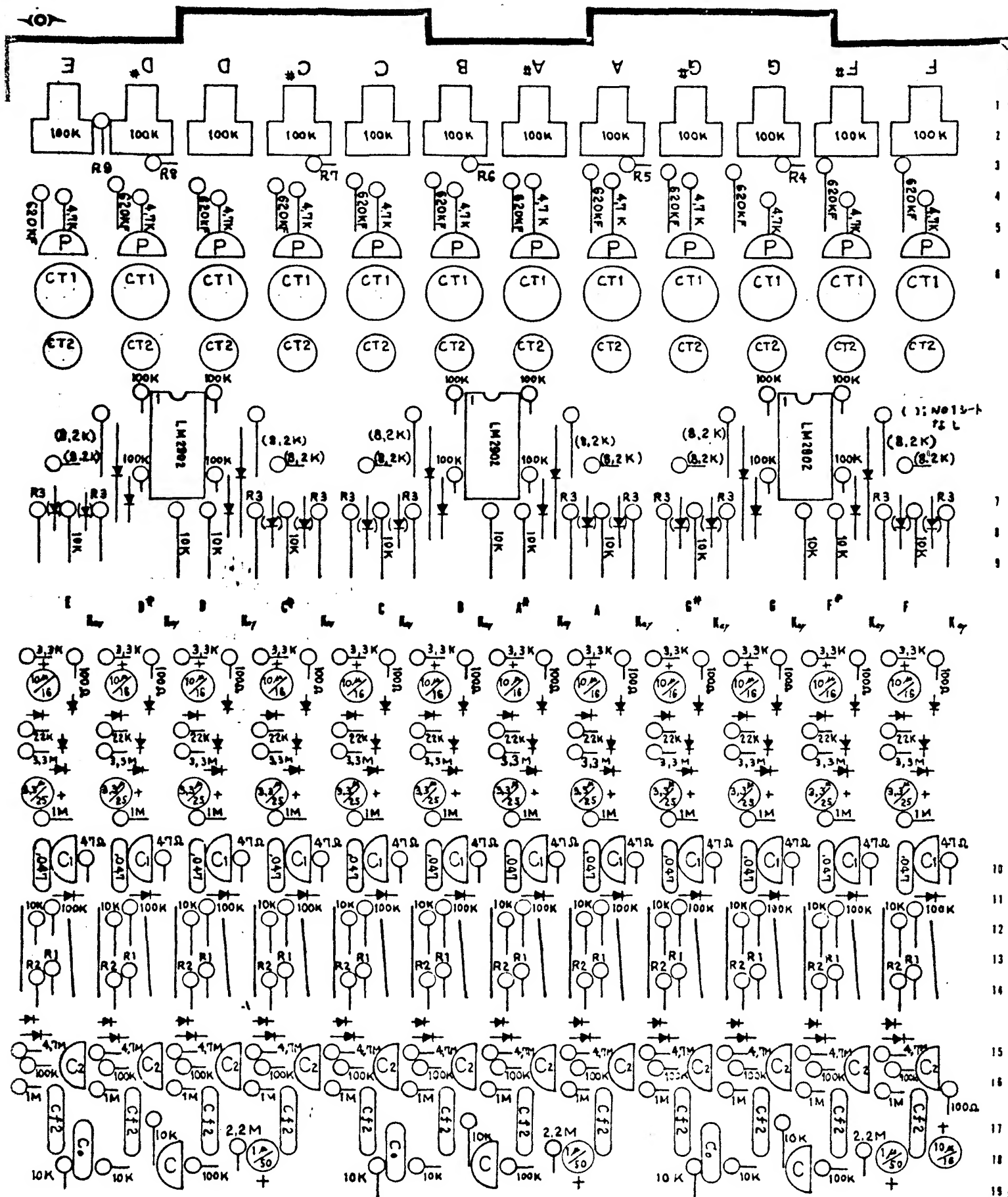


44



PE-1000
SB-083-E
2177
~~2177~~
SBC-083 L
KOD-D30010

19 1/2



POLYPHONIC ENSEMBLE I

SB-000-C

No.

CHECK

20/21